

REVISED* CLEAN AIR ACT SECTION 112(r)

INSPECTION REPORT

GTS Welco – Newark, NJ

Newark, NJ

GENERAL INFORMATION

Stationary Source	GTS Welco – Newark, NJ
Date of Inspection	September 17, 2008
USEPA Inspectors	Dwayne Harrington, USEPA – Region II (Edison, NJ)
Contract Auditor	Rohit Shripewar, Sullivan Group Neil Mulvey, Sullivan Group (Subcontractor)
Description of Activities	<ul style="list-style-type: none">• Opening meeting with facility representative.• Program audit.• Closing meeting with facility representatives. <p>Program audit consisted of the following activities:</p> <ol style="list-style-type: none">1. Document review.2. Field verification.3. Personnel interviews.

STATIONARY SOURCE INFORMATION

EPA Facility ID #	1000 0018 1439
Date of Latest Submission (used for RMP inspection)	Receipt Date: January 31, 2008 (Correction) Anniversary Date: June 16, 2009
Facility Location	425 Avenue P Newark, NJ 07105 (973) 589-7895
Number of Employees	<i>RMP*Submit</i> states 125 employees. Facility management reported 73 employees, including 33 drivers.

Description of Surrounding Area	The facility is located in an industrial area of Newark, NJ just west of Doremus Avenue. The facility is located on a seven acre site surrounded by industrial facilities on all sides.
Participants	Participants included: Dwayne Harrington, USEPA – Region II, Edison, NJ Rohit Shirpewar, USEPA Contractor – Sullivan Group Neil P. Mulvey, USEPA Contractor – Sullivan Group Jim Baird, Production Manager – GTS Welco Leo Desrosiers, Safety & Environmental Services Director – GTS Welco Frank Wojtaszek, Facility Manager – GTS Welco* * Lead representative for GTS Welco

REGISTRATION INFORMATION

Process ID #	73641 (Propane Storage)
Program Level (as reported in RMP)	Program 3
Process Chemicals	Propane @ 160,000-lbs.
NAICS Code	42472 – Petroleum and Petroleum Products Merchant Wholesalers

GENERAL COMMENTS

The GTS Welco facility in Newark, NJ is a gas plant that receives and distributes industrial gases, medical gases, specialty gases, and propane. The majority owner is Praxair. Gases handled include argon, CO₂, helium, nitrogen, oxygen, nitrous oxide, various welding gas mixtures, and specialty gases. The facility fills approximately 83,000 cylinders per month for customer delivery.

The Facility Manager has responsibility for material receipt, unloading, storage, and container filling. The facility operates 24hrs, five days a week. The Distribution Manager is responsible for product delivery.

The facility also receives propane in bulk form via tank truck, stores propane in a single 30,000-gallon storage tank, and then transfers it into cylinders for distribution to customers by truck. The facility receives approximately two propane tank trucks per month. The propane is already odorized when it is received. Typical maximum fill level

of the propane storage tank is 83%. The facility operates four propane cylinder fill stations located in the fill room. The facility fills approximately 2,000 propane cylinders per month, ranging in size from 20-lbs. (backyard barbeque size), 33-lbs. (forklift truck use size), and 100-lbs. Propane cylinders are filled by weight.

Safety systems include an emergency shutdown in case of a fire. Propane transfer valves are designed such that nitrogen pressure is required for the valves to be open. In the event of a fire, tubing on nitrogen supply lines is designed to melt, causing loss of nitrogen pressure resulting in valve closure. The intent is to minimize potential release of propane in a fire situation.

(*Subsequent to EPA's September 2008 RMP inspection, GTS Welco provided additional documentation not available during the inspection, which was later reviewed by EPA. The original EPA RMP Inspection report was amended accordingly.)

RMP DOCUMENTATION

Documents supporting development and implementation of the RMP program are contained in various files, documents, and electronic formats. For example, the company maintains the following electronic databases:

- POIS – Training Database
- COGZ – Maintenance Recordkeeping
- ACMS – Automated Compliance Management System

Comments regarding select RMP elements follow:

Management System [40 CFR 68.15] & Registration

The Facility Manager has overall responsibility for the site and for implementation of the RMP program. Portions of the program are implemented by other facility personnel, including the Production Manager, Safety and Environmental Services Director, and Maintenance Manager. The facility has designated as RMP operators the Production Manager, Production Supervisor, and four Filler Operators. Facility management demonstrated a good understanding of the RMP requirements and the facility's program. RMP documentation and records were accessible and organized.

The most recent RMP registration was submitted on January 31, 2008 as a correction. The five-year anniversary is June 16, 2009.

Hazard Assessment [40 CFR 68.20-68.42]

The facility used EPA's RMP Comp to determine the Worst Case and Alternative Case OCAs. The scenario descriptions and assumptions, parameters input to the models,

distance to endpoints, and impacted residential population and environmental receptors were appropriate to the facility's operations and location.

Process Safety Information (PSI) [40 CFR 68.65]

PSI available for review includes:

- Facility plot plan
- Packaged Gas Facility P&IDs
- Block Flow Diagram
- Propane MSDS
- Narrative description of electrical hazard classification for the propane cylinder fill room and propane storage tank (included on drawing # D-7757; 12/5/97).

The facility did not provide documentation that the LPG process complies with good engineering practices. The narrative description of electrical hazard classification for the propane cylinder fill room and propane storage tank as included on drawing # D-7757; 12/5/97 lacks sufficient detail normally provided in electrical hazard classification drawings for LPG handling equipment.

There was considerable discussion regarding ventilation in the propane cylinder fill room. Documentation on file included:

- A letter dated 1/19/04 from a consultant recommending modifications to ventilation in the propane cylinder fill room. The company incorporated some of the recommendations (i.e. improved natural ventilation), but did not incorporate other recommendations (i.e., forced ventilation).
- A letter dated 10/18/04 from an electrical contractor stating that the propane cylinder fill room *appears* (emphasis added) to be wired consistent with Class 1, Division 1, Group D standards.
- An internal e-mail dated 12/1/04 evaluating ventilation in the propane cylinder fill room against NFPA standards.

After review and discussion of these documents, it is not clear whether the propane cylinder fill room meets required electrical hazard classification and has proper ventilation.

Process Hazard Analysis (PHA) [40 CFR 68.67]

The two most recent PHA studies were on file and available for review. Comments regarding the PHA Report dated 6/30/03 follow:

- PHA session study dates: August 27 & 28, 2002.
- HAZOP method

- Appropriate team member participation including managers, engineers, and a propane filler
- Identified 30 recommendations
- Documentation on the resolution of the 30 recommendations available for review
- Conducted field review to verify implementation of several PHA recommendations (e.g. installation of a line PSV and SOP revision). Verified implementation as documented.

Comments regarding a PHA revalidation completed on 10/31/07:

- Two nodes: Propane Tank and Tank Fill System & Propane Pump and Cylinder Fill.
- HAZOP method
- Revalidation identified several recommendations
- Documentation on the resolution of recommendations available for review

Standard Operating Procedures (SOPs) [40 CFR 68.69]

Written operating procedures available for review included:

- Newark LPG Fill System Operation (SOP# PR001; 8/16/07)
- Propane Blow Down and Purging Manifold Systems (SOP# PR002; 8/16/07)
- Unload from Truck & Disconnecting Following Delivery (12/07)

Other SOPs were available on the company POIS electronic management system, including:

- Cylinder Performance Checks
- LPG Filling
- LPG Filling System Periodic Inspection and Maintenance

Documentation includes record of annual certification.

Training [40 CFR 68.71]

The facility maintains excellent training records using an electronic data management system. Documentation includes lists of topics covered, specific training requirements for individual job titles, detail on training content, frequency of training, and duration of training sessions. Comments on a review of individual training records for two employees follow:

John McDonald, Filler/Loader

- ⇒ Excellent training file
- ⇒ Documentation of training received, topics covered, dates, instructor

- ⇒ Documentation of ‘understanding of training received’ includes written tests and observations (with checklist)
- ⇒ Includes checklist documentation of on-the-job (OTJ) training
- ⇒ Includes documentation on completion of training by the National Propane Gas Association

Dennis Reigal, Filler/Loader

- ⇒ Excellent training file
- ⇒ Documentation of training received, topics covered, dates, instructor
- ⇒ Documentation of ‘understanding of training received’ includes written tests and observations (with checklist)
- ⇒ Includes checklist documentation of OTJ training
- ⇒ Includes documentation on completion of training by the National Propane Gas Association.

Mechanical Integrity [40 CFR 68.73]

The facility has an established mechanical integrity program. The program includes regular inspections and tests of covered equipment to verify operating integrity. Records of inspections and tests on the following equipment were reviewed:

- PSVs on propane storage tank (numbers 60, 61, 62, and 63) – confirmed annual visual inspections performed in 2004, 2005, 2006, and 2007; confirmed that the PSVs were last replaced on 7/14/04 (every five years).
- Emergency shutoff valve (FCV-1710) – confirmed that weekly inspection is performed.
- Emergency shutoff valve (FCV-1730) – confirmed that weekly inspection is performed.
- Main propane cylinder feed pump (P-1701) – confirmed monthly grease and lube.
- Hydrostatic relief valves – confirmed that annual checks were performed in 2004, 2005, 2006, and 2007. Records however are not specific to individual hydrostatic relief valves
- Unloading line breakaway system – scheduled for monthly inspection, however no record of monthly inspections available for review.

Management of Change (MOC) [40 CFR 68.75] & Pre-Startup Review (PSR) [40 CFR 68.77]

The facility has an established MOC/PSR program. Several completed MOC/PSR reviews were evaluated. Documentation included a review of the safety and health implications of the changes, comprehensive pre-startup checklist, and authorizations. There was evidence of updated RMP documentation resulting from the change. The facility also maintains a log of MOC/PSR reviews.

Compliance Audits [40 CFR 68.79]

The two most recent compliance audits were on-file and available for review. The most recent compliance audit was conducted on 11/26/07 covering the period 12/15/04 through 10/19/07. The audit was conducted by a team knowledgeable in RMP and in the regulated process. The audit identified five recommendations which have been resolved.

The prior audit was conducted on 12/20/04 covering the period 8/29/02 through 12/14/04. The audit was conducted by a team knowledgeable in RMP and in the regulated process. Documentation included only a summary of the compliance audit, not the RMP checklist which was used during the audit.

Incident Investigation [40 CFR 68.81]

The facility has a written incident investigation procedure and maintains an on-line accident investigation and tracking system. Facility management reported that there have been no releases of regulated material in the last five-years.

Employee Participation [40 CFR 68.83]

The facility has a written employee participation plan. The plan describes employee participation in the facility's RMP program. Documentation includes records of reviews of various RMP/PSM topics.

Hot Work Permit [40 CFR 68.85]

The facility has a written hot work permit program, including a hot work permit for documentation of authorized hot work. The HWP procedures comply with §1910.252(a). Several completed HWP permits were reviewed for completeness.

Contractor Safety [40 CFR 68.87]

The facility has a written contractor safety procedure. The procedure includes procedures for contractor selection, contractor orientation, and periodic contractor performance evaluations. Reviewed records for the following contractors:

- Air & Gas Technologies
- Ascension Construction
- Air Creations
- Arlington Scale

Files on these contractors did not include a record of contractor orientation (except for Arlington Scale) nor of contractor selection. Files did include documentation of periodic performance evaluations.

Emergency Response [40 CFR 68.90 – 68.95]

The facility does not maintain an internal hazmat response team or fire brigade. The facility maintains an emergency action plan to immediately control incidents if possible and evacuate the facility, however, they coordinate with the local fire department to respond to and mitigate emergencies at the facility.

The facility's emergency response plan was reviewed by USEPA.

FINDINGS/RECOMMENDATIONS

FINDINGS:

Process Safety Information (PSI) [40 CFR 68.65]

- ❑ There was considerable discussion regarding ventilation in the propane cylinder fill room. Documentation on file included:
 - A letter dated 1/19/04 from a consultant recommending modifications to ventilation in the propane cylinder fill room. The company incorporated some of the recommendations (i.e. improved natural ventilation), but did not incorporate other recommendations (i.e., forced ventilation).
 - A letter dated 10/18/04 from an electrical contractor stating that the propane cylinder fill room *appears* (emphasis added) to be wired consistent with Class 1, Division 1, Group D standards.
 - An internal e-mail dated 12/1/04 evaluating ventilation in the propane cylinder fill room against NFPA standards.

After review and discussion of these documents, it is not clear whether the propane cylinder fill room meets required electrical hazard classification and has proper ventilation. **The facility must conduct an evaluation and make a determination regarding electrical hazard classification and ventilation in the propane cylinder storage room to determine if it complies with recognized and generally accepted good engineering practices, as required by 40 CFR 68.65(d)(2). The evaluation should also consider the need for LEL detectors in the propane cylinder fill room.**

- ❑ The description of electrical hazard classification for the propane cylinder fill room and storage tank is not specific to the equipment handling LPGs. **While a general description is provided, electrical classifications must be depicted on a drawing or described more specifically to the process equipment, as required by 40 CFR 68.65(d)(1)(iii).**

Contractor Safety [40 CFR 68.87]

- ❑ Records reviewed regarding implementation of the contractor safety procedure included documentation of periodic performance evaluations, but not of contractor orientations and contractor selection. **The facility must ensure that implementation of the Contractor Safety Program for covered contractors includes contractor selection, as required by 40 CFR 68.87(b)(1) and contractor orientation, as required by 40 CFR 68.87(b)(2) & (3).**

RECOMMENDATIONS:

Mechanical Integrity [40 CFR 68.73]

- ❑ The mechanical integrity program specifies a monthly inspection of the tank truck unloading line breakaway system. However, there were no records available for review of monthly inspections of the breakaway system. Note also that this was a recommendation identified during the 10/31/07 PHA revalidation. **The facility should document inspections and tests of the line breakaway system as specified in its mechanical integrity program, per 40 CFR 68.73(d)(1).**
- ❑ Inspection and test records for annual checks of the hydrostatic relief valves are not specific to the individual hydrostatic relief valve checked. **The facility should modify mechanical integrity recordkeeping so that completed inspection and tests for the hydrostatic relief valves are specific to the individual piece of equipment checked, as required by 40 CFR 68.73(d)(4).**